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Subject: Using Nitrogen Fertilizers on Corn and Feed Crops in the Southeast

Field Distribution: Extension Directors and Editors, AAA Chairmen, Regional FSA Directors and Information Workers in Md., Va., Ky., Tenn., Ark., Tex., La., Ala., Fla., Ga., N.C., S.C.

Suggested Use: For administrative information to county workers and general background for press and radio materials.

MORE FEED IS NEEDED, NITROGEN WILL INCREASE YIELDS. Farmers in the South--from Arkansas and east Texas to the Atlantic Coast--could greatly increase their feed crop production by using more fertilizers. This is true particularly of corn and forage crops. The extra feeds that could be produced in this way are badly needed. Farmers have increased the numbers of livestock in their herds to record heights. Reserve stocks of feed in all parts of the country have largely disappeared. Livestock producers must therefore grow on their own farms most of the feeds they will need since farmers in other regions will not have surpluses on which deficit-feed areas can draw. To increase yields more nitrogen fertilizer especially should be used. Nitrogen is now in fair supply in the form of ammonium nitrate. To keep manufacturing plants working at capacity farmers should be asked to order ammonium nitrate now. To be effective this year it must be applied in the Southeast during the next two months--not later than about July 1.

FEED NEEDS IN THE SOUTH: Even in normal times the Southern States, especially in the Southeast, have been a deficit feed producing area. Because of this lack of home-grown grains and roughages the present livestock numbers cannot be maintained at maximum production.

The need for feed is now greater than at any other time in history. On January 1 this year the number of cattle and calves in the South Atlantic States was almost a million head higher than the 1933-42 average. In the South Central States the number was up more than 2 1/2 million.

As for hogs, the figures for January 1 show an increase of approximately 1 3/4 million head over the average for 1933-42 in the South Atlantic States. In the South Central States hog numbers were up almost 4 1/2 million from the average.

The numbers of chickens in farm flocks also were at high levels.

On the other hand the supply of corn and oats per unit of livestock in the South Central States January 1 was only 83 percent of that on the same date a year earlier; in the South Atlantic States it was 93 percent.

In almost all regions of the country livestock numbers are high. Surpluses of feed grains have largely disappeared. Few areas now have adequate corn or other grains. Even if feed were available in other regions it would be expensive and difficult to move because of the shortage in transportation.

The South cannot afford to give up its livestock herds. Moreover, the Nation needs the full production of its entire farm resources. Where is the feed coming from to fatten and maintain at the highest productive efficiency all of the extra livestock now on farms in the South and Southeast?

HOW YIELDS CAN BE INCREASED. Producers know that year in and year out it's good business to grow most of their own feed. That is more true now than ever.

In all of the South and particularly in the Southeast the spring has been wet and cold. Most of the corn may have been planted, but it is late. Other feed crops are now being planted or will be planted in the weeks immediately ahead.

Fortunately, there is a very real possibility of boosting yields per acre, even though planting is late. The chance lies in application of greater quantities of nitrogen fertilizer than in the past, especially on corn. The nitrogen can be applied as a top or side dressing at any time up to late June or early July depending on the weather.

BENEFITS TO CROPS FROM NITROGEN. Farmers in that part of the South from Virginia to east Texas and eastern Oklahoma normally grow about 20 million acres of corn. The average application of nitrogen to corn in these States is about 10 pounds per acre.

Experimental results in this area show that in many acres on corn, cotton, and many other crops, the nitrogen application could be as much as 32 pounds per acre. In general, under good conditions, two pounds of nitrogen will produce one additional bushel of corn. An extra ton of ammonium nitrate could therefore be expected to produce an additional yield of about 325 bushels of corn, as the fertilizer contains 32.5 percent nitrogen.

Be increasing the average nitrogen application by even five pounds--to about 15 pounds per acre--over the entire corn acreage in the area described it would be possible for farmers to harvest 50,000,000 bushels more corn from the same acreage. This corn would be immediately available for livestock feeding.

Additional amounts of nitrogen will also produce worthwhile results when used on cotton and other crops.

In addition to the greater yields from the same land, the crops would be of better quality. Moreover, the increase in yield would be relatively much more than the labor and cost of applying the fertilizer.

Fertilizer tests throughout the area show that on the average one pound of nitrogen will produce better than 30 pounds of good quality hay. On this basis one ton of ammonium nitrate may reasonably be expected to produce more than 9 additional tons of forage.

AMMONIUM NITRATE NOW PLENTIFUL. Nitrogen fertilizers are both chemical and organic. The supply of organic nitrogen is, however, short.

Chemical nitrogen materials used by farmers in the South are mainly nitrate of soda, cal-nitro, and ammonium nitrate. Ammonium nitrate is now the most abundant of these because of the large factory capacity developed to produce it for explosives.

Because of the late season farmers have not been ordering and dealers have not been stocking ammonium nitrate in sufficient amounts to keep the plants operating at capacity. Storage space at the plants is limited. If farmers are to take full advantage of the opportunity to increase feed yields through the use of the nitrate fertilizer, it must be kept moving into use on farms. The amount of ammonium nitrate available for direct application to crops will be greatest in the next two to three months. After that industry will again begin absorbing more of the supply.

Ammonium nitrate is new to many farmers in the Southeast where much of the fertilizer is used. It is used, however, in the same ways as are the other types. It is satisfactory on any crops on which producers normally use nitrogen fertilizers--corn and feed and forage crops in particular. It is now being manufactured in granular form so treated that it is easy to use and handle. It contains 32-5 percent nitrogen which is higher than some of the older nitrogen fertilizers.

LARGER ALLOCATIONS TO SOUTHEAST. Supplies of nitrogen are large enough to provide the entire country with added amounts but the main use in May and June is in the Southeast. The increased applications in the Southeast will be in the region where the feed shortage is critical. The region is also nearest the sources of supply so transportation from factories to farms is less of a problem than in other regions. The largest quantities of the available ammonium nitrate have therefore been allocated for use in the Southeastern States.

GETTING SUPPLIES TO FARMERS. Farmers can get ammonium nitrate through their regular fertilizer dealers, cooperatives, or other normal distribution channels. Where nitrate of soda, sulfate of ammonia, or other nitrogenous material is immediately available, however, farmers should not hesitate to use these fertilizers. The important thing is to supply the nitrogen needed to speed up the growth rate of the lateplanted feed crops and to increase yields.

It is essential, at the county level, that contacts be made immediately with the local dealers and close cooperation be maintained to assist them in ordering necessary supplies of nitrogen materials, particularly ammonium nitrate. In this way it will be possible to have adequate supplies on hand, to take care of the increased demands resulting from the emphasis of the campaign to encourage greater use of nitrogen for increase production of feed and of other crops.

HOW TO USE NITRATE FERTILIZERS. Many farmers are already familiar with the recommended practices in applying fertilizers in their own States. Experiments have been carried on widely by stations throughout the South. Their recommendations vary. Farmers not familiar with recommended practices in their own localities can obtain needed information through county extension agents or direct from the State College of Agriculture.